

CLAIMS

1. GEOMETRICAL METHOD TO DETERMINE THE LOCATION OF THE MAIN INCISION LINE IN A SURGERY TO CORRECT PENIS CURVATURE, which comprises the following steps:

- 5           a. inducing and keeping the penis erect;  
              b. determining a line along the central penis axis (6);  
              c. determining a tangential line (7), (8) or (7'), (8') to each one  
of the two substantially straight segments (25), (30) adjacent to the penis  
curvature (20) to be corrected;

10           d. determining the bisectrix (9) on the intersection (l), (l') of said  
two tangential lines; and

              e. determining the main incision line (12) circumferential on the  
body of the penis, whose direction coincides with the direction of the bisectrix  
(9).

15           2. METHOD of claim 1, in which the penis is kept under  
maximum erection by means of a pump, particularly an infusion pump,  
continuously injecting serum into the corpora cavernosa of the penis.

20           3. METHOD of claim 1, in which the extension of said main  
incision line (12) is enough to fully break force lines present on the penis  
curvature (20) to be corrected.

              4. METHOD of claim 1, which is employed in a corrective  
surgery to increase the shorter side of the penis.

              5. METHOD of claim 1, which is employed in a corrective  
surgery to reduce the longer side of the penis.

25           6. GEOMETRICAL METHOD TO DETERMINE THE  
DISTRIBUTION AND SIZE OF THE FORKED ENDS OF THE MAIN INCISION  
LINE IN A SURGERY TO CORRECT PENIS CURVATURE, which, additionally  
to the steps of the method of claim 1, comprises the following steps:

f. determining two perpendicular lines (10),(11) or (10'),(11') respectively to said tangential lines (7), (8) or (7'), (8'), each one over a straight segment (25), (30) of the penis, so as not to cross the curved region (20);

5 g. determining the difference (C) between the extension (A) of the longer side and the extension (B) of the shorter side of the penis, between said two perpendicular lines (10), (11) or (10'), (11') ;

10 h. determining a perpendicular line (15), (15') to the main incision line (12), passing at an end point (G) ((G') at the opposed end) with the same length of said difference (C), with ends (F) and (F') (or (F'') and (F''')) at the opposed end), equally distant from the bisectrix (9);

i. determining the dimension of a segment (S), so that:

$$S = \operatorname{tg}(90 - (\alpha/2)) \cdot C/2$$

15 in which  $\alpha$  is the desired angle between both ends (14), (14') on the fork of the main incision line (12) and (C) is the difference mentioned in item (g).

j. determining the location of a point (E) ((E') at the opposed end), distant from the point (G) ((G') at the opposed end), with the value of extension of said segment (S) along the main incision line (12);

20 k. link the point (E) to the points (F) and (F') ((E') to the points (F'') and (F''')), so to obtain the distribution of forked ends with the desired geometry, with angle  $\alpha$  and a size determined by the distance between points (E) and (F), or (E) and (F').

7. METHOD of claim 6, in which the path of said main incision line (12) is such not to cross both insertions of the intracavernosum sept.

25 8. METHOD of claim 6, in which said perpendicular lines (10), (11) are drafted passing through points where said line of the central penis axis (6) starts to get farther from said tangential lines (7), (8), no longer coinciding with them.

9. METHOD of claim 6, in which said perpendicular lines (10'), (11') are drafted as passing through any point of the central penis axis (6) which is not over the curved region (20) of the penis.

10. METHOD of claim 6, in which the angle  $\alpha$  is between  $60^\circ$  and  
5  $180^\circ$ , particularly between  $90^\circ$  and  $150^\circ$ , more particularly about  $120^\circ$ .

11. METHOD of claim 6, which is employed in a corrective surgery to increase the shorter side of the penis.

12. GEOMETRICAL METHOD TO DETERMINE THE DIMENSIONS OF THE DEFECT GENERATED BY A SURGERY TO  
10 CORRECT PENIS CURVATURE, which comprises the following steps:

a. determining an extension (L) at the main incision line (12) between points (G) and (G');

b. determining the difference (C) between the extension (A) of the longer side and the extension (B) of the shorter side of the penis, between said  
15 perpendicular lines (10), (11), as per the step (g) of the method of claim 7.

c. to obtain the dimensions of a rectangular defect, the extension (L) represents the height of the defect and the difference (C) represents the width of the defect;

d. to obtain the dimensions of a trapezoidal defect, the extension  
20 (L) represents the height of the defect, the dimension of the shorter base (D) of the trapezium is between about 10% and about 50% of the (C) value and the dimension of the longer base of the trapezium is between about 110% and 150% of the (C) value.

13. METHOD of claim (12), which additionally comprises the  
25 following steps:

e. proportionally increase the measurements from step (c) in case of a rectangular defect, or the measurements from step (d) in case of a trapezoidal defect, for the use of grafting material subject to contraction;

d. transport and draw the measurements obtained in items (c) or (d) over the grafting material, optionally with said correction of the contraction of the item (e).

**14. SURGICAL METHOD TO CORRECT PENIS CURVATURE,**

5 which comprises the following steps:

a - geometrically determining the location of the main incision line crosswise to the central penis axis, so that it is located over the maximum curved region to be corrected.

10 b - to correct the curvature by increasing the shorter side of the penis:

b1 - geometrically determining the desired distribution and size of the forked ends of the main incision line of any of claims 6 to 11;

b2 - geometrically determining the size of the defect created by the incision on the main line and the forked ends of any of claims 12 or 13.

15 b3 - effecting the main incision and the incision of the forked ends, generating a defect;

b4 – introducing the graft over said defect, substantially coincident with the defect, optionally with corrected dimensions bearing in mind the contraction of the grafting material.

20 c - to correct the curvature by reducing the longer side of the penis, the longer side is reduced by a value (C) in the curvature region by means of one or more of the following skills:

c1 - plication or pleat; and/or

c2 - excision and suture; and/or

25 c3 - lengthwise incision and crosswise suture.

15. METHOD of claim 14, which uses any application of said skills over one or more places inside the curvature region (20), as long as the total reduction is the extension of (C).

**16. AUXILIARY DEVICE FOR A SURGERY TO CORRECT PENIS CURVATURE,** which comprises:

- a. two longer rules (22), (23) linked together by a junction (26) and adjustable between them along a hypothetical plan containing them, having  
5 rotation and/or translation between one and the other;
- b. a flexible measurement element (24) connected to said junction (26) of the two longer rules ((22), (23));
- c. two shorter rules ((28), (29)), each one respectively fixed (32) to one of said longer rules ((22), (23)), perpendicularly to them, which are able  
10 to move in translation along their lengths.

17. DEVICE of claim 16, which additionally comprises elements to non-permanently clamp the device (21) to the penis or to portions of it.

18. DEVICE of claim 16, which additionally comprises a second device comprising elements (a), (b) and (c) associated to the first device (21)  
15 and substantially parallel to it.

19. DEVICE of claim 16, in which the longer rules ((22), (23)) are provided with rails ((20), (31)) allowing to move one of them with relation to the other one.

20. DEVICE of claim 16, in which the shorter rules ((28), (29)) are  
20 flexible.

21. DEVICE of claim 16, in which the measurement element (24) is provided with a trail or tear (35).

22. DEVICE of claim 16, in which the means to clamp the longer rules ((22), (23)) is provided with two concentric axes ((26), (27)) marked so to  
25 allow the visualization visualize and/or verification of the angle.

23. DEVICE of claim 16, which has two concentric axes (26) and (27), which may rotate one with relation to the other, one linked to one of said longer rules ((22), (23)) and another one linked to said measurement ribbon

(24).

24. DEVICE of claim 21, in which said central tear (35) has a width (X) between 1 mm and 5 mm.

25. DEVICE of claim 16, in which said measurement ribbon  
5 (24) is flexible and can rotate around the pin (26), orthogonal to the plan containing the longer rules ((22), (23)).

26. DEVICE of claim 17, in which said clamping means are clamps or staples.

27. DEVICE of claim 16, which is disposable.

10 28. DEVICE of claim 16 in which said longer rules ((22), (23)) are provided with a clamping element allowing to non-permanently clamp the position of one rule with relation to the other one.